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IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :
TETSUJIRO KONDO, ET AL. : EXAMINER: THIRUGNANAM, G.
SERIAL NO: 10/552,467 :
FILED: OCTOBER 7, 2005 : GROUP ART UNIT: 2624
FOR: IMAGE PROCESSING DEVICE,
IMAGE PROCESSING METHOD, AND
PROGRAM :
:

REPLY BRIEF

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

This is a reply to the Examiner's Answer dated June 1, 2010 (herein, the EA). This Reply Brief addresses specific assertions made in the EA.

- A. **The specification discloses "... combining the motion-blurring-mitigated object image ... into a space-time location in each of the multiple images based on the motion vector ... ", as recited in independent Claims 1, 8, 15 and 16**

At p. 11, the EA notes that "The basis of contention is whether the specification provides support for the claimed feature ... into a space-time location in each of the multiple images." Specifically, pp. 11-12 of the EA appears to take the position that the specification discloses combining the motion-blurring mitigated object image into "subsequent" or "multiple images", going so far as to assert that "The use of 'subsequent' of 'multiple images' may have negated the pending rejection under 35 USC 112 1st paragraph." P. 12 of

the EA, citing p. 16, ll. 7-17 of the specification, asserts that "There is no disclosure that the object is combined into both images, just 'the other image'."

Appellants respectfully traverse this position, as the specification clearly discloses "... combining the motion-blurring-mitigated object image ... into a space-time location in each of the multiple images based on the motion vector ...", as recited in independent Claims 1, 8, 15 and 16.

1. Original Claims 1, 8 and 15

As an initial matter, Appellants note that Claims 1, 8 and 15 in the originally filed specification recite the features of "... detecting a motion vector about a moving object that moves in multiple images ..." and "... combining the motion-blurring-mitigated object image ... into a space-time location, *in each image*, corresponding to the motion vector ..."

(emphasis added)

In this regard Appellants note MPEP § 608.01(l), which states "In establishing a disclosure, applicant may rely on the description and drawing as filed but also on the original claims if their content justifies it." (emphasis added) Therefore, the originally filed disclosure, at least by virtue of originally filed Claims 1, 8 and 15 expressly disclose "... combining the motion-blurring-mitigated object image ... into a space-time location in each of the multiple images based on the motion vector ...", as recited in independent Claims 1, 8, 15 and 16.

Accordingly, Appellants respectfully request that the rejection under 35 U.S.C. § 112, first paragraph, be withdrawn at least by virtue of the support and disclosure of originally filed Claims 1, 8 and 15.

2. Combining the motion-blurring-mitigated object image into “the first image”

At p. 12 the EA asserts that

There is no disclosure that the object is combined in both images, just ‘the other image’.

Appellants respectfully traverse this assertion. A clear example of combining the motion-blurring-mitigated object image with the image from which it was extracted (i.e., “the first image” can be found at least at Fig. 5 and its corresponding description.

Fig. 5 and p. p. 14, l. 22 – p. 16, l. 17 of the specification describe a configuration of the apparatus 20 for processing the image. As shown in Fig. 5, image data DVa supplied to the apparatus 20 is in turn provided to a motion vector detection section 30 and a motion-blurring-mitigated object image generation section 40. The motion vector detection section 30 detects a motion vector of moving object that moves in each of the multiple images, each of which is composed of multiple pixels and acquired by the image sensor 10 having time integration effects.

Specifically, processing regions subject to motion blurring mitigation processing are sequentially extracted, so that a motion vector MVC that corresponds to the moving object in a processing region can be detected and supplied to the motion-blurring-mitigated object image generation section 40. The motion-blurring-mitigated object image generation section 40 specifies a region or calculates a mixture ratio based on the motion vector MVC, processing region information HZ, and the image data DVa and uses the calculated mixture ratio to separate foreground component and background component from each other.

Furthermore, *it performs a motion blurring adjustment on an image of the separated foreground component to generate a motion-blurring-mitigated object image. Further, foreground component image data DBf that is image data of the motion-blurring-mitigated object image acquired by this motion-blurring adjustment is supplied to the output section*

50. Image data DBb of the separated background component is also supplied to the output section 50.

The output section 50 **combines an image of foreground region in which motion blurring based on the foreground component image data DBf onto a background image based on the background component image data DBb**, thereby generating image data DVout of the motion-blurring-mitigated image and outputting it.

Therefore, an input image DVa (e.g. “the first image”) is separated into background component image data DBb and foreground component image data DBf. As shown in Fig. 5, DBb and DBf are then **combined in the output section 50** to output the motion-blurring-mitigated foreground image (DBf) combined with the background (DBb), which were separated from the same input image DVa.

Therefore, the originally filed specification clearly discloses that the motion-blurring-mitigated object image can be recombined with a background component of an original input image DVa from which each of the foreground and background components were separated. Accordingly, in contrast to the assertion set forth in the EA, the motion-blurring mitigated image is combined with the “first image” (i.e. the image from which DBf was extracted).

3. Combining the motion-blurring mitigated object image into the “other images”

The EA, at pp. 13 and 15 takes the position that p. 47, ll. 1-11 and Figs. 24A-24C merely describe a process of “tracking” a moving object image (OBf), and asserts that

There is no disclosure that the same blurring mitigated object image (DBf) is combined into each of the multiple frames.

The Examiner disagrees with Applicant’s allegation that OBf corresponds to the image data of the motion-blurring mitigated object image.

Appellants respectfully traverse each of these assertions, as at least p. 46, l. 10 – p. 48, l. 17 and Figs. 24A-25F clearly disclose that OBf corresponds to a motion-blurring-

mitigated image that is being tracked by outputting the motion-blurring-mitigated object image in each of a plurality of multiple frames.

P. 47, ll. 7-11 of the specification, for example, discloses

... by controlling a display position of an image so that so that the image of ***the motion-blurring-mitigated moving object OBf*** may be located to a predetermined position on a screen on the basis of the moving object OBf, such an image can be ***output*** as to track the moving object OBf.

Therefore, the image OBf depicted as an output image across a plurality of time frames of the video content, as shown in Figs. 24A-24C is, in fact, ***motion-blurring-mitigated moving object OBf***. In other words, the same image output in each of the temporal sequence of frames (e.g., each of the multiple frames) is, in fact, a ***motion-blurring-mitigated object*** image.

B. Conclusion

Further, Appellants reiterate that a proper analysis has not been performed as to whether the written description requirement has been met.

As noted in the Appeal Brief, with respect to the written description requirement, there is no *in haec verba* requirement, and claim limitations may be supported by the specification through ***express, implicit, or inherent*** disclosure.¹ To satisfy the written description requirement, a patent specification must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention.²

If a skilled artisan would have understood the inventor to be in possession of the claimed invention at the time of filing, even if every nuance of the claims is not explicitly described in the specification, then the adequate description requirement is met. See, e.g.,

¹ MPEP § 2163.

² *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555 (Fed. Cir. 1991).

Vas-Cath, 935 F.2d at 1563, 19 USPQ2d at 1116; *Martin v. Johnson*, 454 F.2d 746, 751, 172

USPQ 391, 395 (CCPA 1972) (*stating "the description need not be in ipsis verbis [i.e., "in the same words"] to be sufficient"*).

The analysis of whether the specification complies with the written description “is conducted from the standpoint of one of skill in the art. Generally, there is an inverse correlation between the level of skill and knowledge in the art and the specificity of disclosure necessary to satisfy the written description requirement.”³

Moreover, the MPEP discusses several factors that must be considered in order to make a 112, first paragraph, rejection for lack of written description. The MPEP states:

Whether the specification shows that applicant was in possession of the claimed invention is not a single, simple determination, but rather is a factual determination reached by considering a number of factors. Factors to be considered in determining whether there is sufficient evidence of possession include the level of skill and knowledge in the art, partial structure, physical and/or chemical properties, functional characteristics alone or coupled with a known or disclosed correlation between structure and function, and the method of making the claimed invention.

* * * *

The description needed to satisfy the requirements of 35 U.S.C. 112 "varies with the nature and scope of the invention at issue, and with the scientific and technologic knowledge already in existence." *Capon v. Eshhar*, 418 F.3d at 1357, 76 USPQ2d at 1084.

* * * *

Thus, an inventor is not required to describe every detail of his invention. An applicant's disclosure obligation varies according to the art to which the invention pertains. Disclosing a microprocessor capable of performing certain functions is sufficient to satisfy the requirement of section 112, first paragraph, when one skilled in the relevant art would understand what is intended and know how to carry it out.”).⁴

Neither the FA nor the EA provide any explicit analysis as to the above-noted factors, which are pertinent to a determination of compliance with the written description

³ Page A-7 of the USPTO's *Written Description Training Materials*, revision 1, March 25, 2008.

⁴ MPEP §2163, emphasis added.

Application No. 10/552,467
Reply to Examiner's Answer of June 1, 2010

requirement. Thus, the FA and EA have failed to set forth a *prima facie* case of failing to comply with the written description requirement.

As discussed above, the originally filed disclosure does explicitly describe the feature of "... combining the motion-blurring-mitigated object image ... into a space-time location in each of the multiple images ..." Thus, a person of ordinary skill in the art would recognize that the inventor was in possession of the claimed invention at the time of filing and the written description requirement is satisfied.

Accordingly, Appellants respectfully request that the rejection of Claims 1, 8, 15 and 16 under 35 U.S.C. § 112, first paragraph, be REVERSED.

Respectfully submitted,

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